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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
| 09/372,322 | 08/11/99 | MIZUTANI | H NEM-01601 |

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|--------------------------|-----------|--------------------------|----------|
| <input type="checkbox"/> | MMC2/0919 | <input type="checkbox"/> | EXAMINER |
|--------------------------|-----------|--------------------------|----------|

PATENT GROUP
HUTCHINS, WHEELER & DITTMAR
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|----------|--------------------------|----------|--------------------------|--------------|
| JONES, S | <input type="checkbox"/> | ART UNIT | <input type="checkbox"/> | PAPER NUMBER |
|----------|--------------------------|----------|--------------------------|--------------|

2817

DATE MAILED: 09/19/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/372,322 | MIZUTANI, HIROSHI | |
| | Examiner | Art Unit | |
| | Stephen E. Jones | 2817 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-9 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-9 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - a) All b) Some * c) None of the CERTIFIED copies of the priority documents have been:
 1. received.
 2. received in Application No. (Series Code / Serial Number) _____.
 3. received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- | | |
|---|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> . | 20) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 5 is objected to because of the following informalities:

The term "sandwitched" should be spelled --sandwiched--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 1, the phrase "said source first" lacks antecedent basis. Should the recitation "said source first" instead read as --said first electrode--?

Regarding Claim 5, lines 6-9, it is not clear as how "an element" relates to the invention or to "a signal terminal" recited on line 10. Also, on line 7, it appears that a semicolon should be used to replace the comma after the term "line".

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 5 (insofar as could be understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Fleming et al., *GaAs SAMP Device For Ku-Band Switching*.

Fleming et al. discloses coplanar transmission lines on a semiconductor substrate including a center signal conductor electrode between two parallel electrodes which are grounded. Note that it is inherent that the center signal electrode would have terminals on its ends for signal input/output.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleming et al..

Fleming et al. discloses coplanar transmission lines on a semiconductor substrate as discussed above. However, Fleming et al. does not disclose: the first electrode being a drain electrode of a transistor, the second electrode being a source electrode of said transistor, and the third electrode is a gate electrode of said transistor (Claims 2 and 6); or the first electrode being a first cathode electrode of a diode, the second electrode being a second cathode electrode of said diode, and the third electrode is a anode electrode of said diode (Claims 3 and 7); or the first electrode being a first anode electrode of a diode, the second electrode being a second anode

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electrode of said diode, and the third electrode is a cathode electrode of said diode (Claims 4 and 8); or that the electrodes are formed on a substrate including an AlGaAs layer and an InGaAs layer (Claim 9).

It would have been an obvious design choice to one of ordinary skill in the art to have used the coplanar transmission lines as taught by Fleming et al. to realize a variety of electronic devices: for example, to have the first electrode being a drain electrode of a transistor, the second electrode being a source electrode of said transistor, and the third electrode is a gate electrode of said transistor (Claims 2 and 6); or the first electrode being a first cathode electrode of a diode, the second electrode being a second cathode electrode of said diode, and the third electrode is a anode electrode of said diode (Claims 3 and 7); or the first electrode being a first anode electrode of a diode, the second electrode being a second anode electrode of said diode, and the third electrode is a cathode electrode of said diode (Claims 4 and 8), because the diodes and transistors as mentioned are well-known in the art, and it would have been an art-recognized use for coplanar transmission lines.

Also, it would have been an obvious design choice to one of ordinary skill in the art to have formed the coplanar transmission lines as taught by Fleming et al. on a well-known semiconductor substrate such as one including an AlGaAs layer and an InGaAs layer (Claim 9) which would have been art-recognized equivalents to the disclosed GaAs substrate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 703-305-0390. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bob Pascal can be reached on 703-308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-0142 for regular communications and 703-305-0142 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Benny Lee

BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817

sej
September 18, 2000